

GLUSHKOVA, M.A.; SEYFER, M.A.

Interaction between vanadyl sulfate and sodium ferrocyanide,
Zhur.neorg.khim. 8 no.1:247-249 Ja '63, (MIR 16:5)
(Vanadium sulfate) (Sodium ferrocyanide)

MARKOV, V.P. (deceased); GLUSHKOVA, M.A.; YURSHOV, N.N.

Polymeric nature of ammonium dialuminium amidohexachloride.
Zhur. neorg. khim. 9 no.5:1144-1146 My '64. (MIRA 17:9)

I, Institut obshchey i neorganicheskoy khimii imeni N.S.
Kurnakova AN SSSR.

ACCESSION NR: AP5014079

545.882:41.6

53

AUTHOR: Buslayev, Yu. A.; Sinitayna, S. M.; Glushkova, M. A.; Yermakova, M. M.; Polikarpova, M. A.

TITLE: Niobium-base inorganic polymers

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 4, 1965, 498-502

TOPIC TAGS: niobium nitryl chloride, inorganic polymer, niobium chloride, ir spectroscopy, polymer chain

ABSTRACT: The authors attempted to prepare niobium nitryl chloride NbNCl₂ from NbCl₅ and NH₄Cl in nitrobenzene. The actual formulas of the products obtained were

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were found to be illegible.

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ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakova Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences SSSR)

Card 2/3

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2"

L 55951-65

ACCESSION NR.: AP5014079

SUBMITTED: 19Jan65

NO REF Sov: 004

ENCL: 00

OTHER: 001

SUB CODE: IC

Card 3/3

L 62927-65 EWF(m)/EPF(c)/EPF(n)-2/EWF(l)/T/EWF(t)/EWF(u) TEF(c)/WPI
JD/WW/EM
ACCESSION NR: AP5020504

UR/0078/05/10/006/043/1945
546.105'171.1'131

AUTHOR: Glushkova, M. A.; Yershova, M. H.; Buslayev, Yu. A.

TITLE: Synthesis of phosphonitrile chloride in nitrobenzene

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 8, 1965, 1945-1945

TOPIC TAGS: phosphonitrile, nitrobenzene, chloride, polymer, synthetic material

ABSTRACT: Phosphonitrile chloride was synthesized in nitrobenzene from PCl_5 and NH_4Cl (1:1.2). The reaction was carried out for 5-6 hr at 140-150°C, and the yield was 70%. The composition of the products formed may be represented by the formula PNC_2 . The crystalline mass formed apparently consists of a mixture of the trimer and tetramer of phosphonitrile chloride, whereas the rubberlike substance formed is a mixture of phosphonitrile chlorides with a higher degree of polymerization. The presence of carbon in the rubberlike compound indicates that nitrobenzene undergoes changes during the synthesis, and that the products of its decomposition are combined with phosphonitrile chloride. The solubility of many transition metal chlorides in nitrobenzene makes it possible to synthesize phosphonitrile chlorides in

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L 62927-65

ACCESSION NR: AP5020504

the presence of certain transition metal chlorides in order to obtain compounds with mixed inorganic links. Orig. art. has: 2 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii im. N. S. Kurnakovskogo Akademii nauk SSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 13Nov64

ENCL: 00

SUB CODE: GC, MT

NO IEF SOV: 003

CTHER: 001

Card 2/2

GLUSHKOVA, M.A.; YERSHOVA, M.M.; BUSLAYER, Yu.A.

Synthesis of phosphonitrile chloride in nitrobenzene.

Zhur.neorg.khim. 10 no.8-1943-1945 Ag '65.

(MIRA 19±1)

1. Institut obshchey i neorganicheskoy khimii imeni N.S.Kurnakova
AN SSSR. Submitted November 13, 1964.

BOROVSKAYA, B.D., doktor meditsinskikh nauk; GLUSHKOVA, M.A.; MIKHEYEVA, M.I.

Some factors indicating renal function and chloride metabolism
during systematic intake of Novo-Izhevsk mineral water. Urologia
22 no.6:50-54 L-D '57.
(MIR 11:2)

1. Iz propedevticheskoy terapevтической kliniki (zav. - prof. A.Ya.,
Gubergrita) Izhevskogo meditsinskogo instituta.
(KIDNEY FUNCTION TESTS, eff. of drugs on
mineral water from Novoizhevsk)
(CHLORIDES, metab.
eff. of Novoizhevsk mineral water)
(MINERAL WATER, eff.
Novoizhevsk mineral water, on renal funct. &
on chloride metab.)

GRIGORENKO, P.G.; GLUSHKOVA, M.I.

Geomorphological characteristics of the cotton zone of southern
Kirghizia. Trudy Inst.geol.AN Kir.SSR no.6:179-187 '55.
(Kirghizistan--Physical geography) (MKRA 10:2)

GLUSHKOVA, M.I.; GRIGORENKO, P.G.

The Osh Karasu Oasis; outline on physico-geographical conditions.
Izv.AN Kir.SSR no.2:101-111 '56. (MIRA 9:9)
(Osh Karasu Oasis--Physical geography)

GLUSHKOVA, M.I.

Relief and some agricultural characteristics of the foothills
region of Osh Province, Kirghiz S.S.R. Trudy Otd. geog.i Gidro.
fiz.-geog.sta.AN Kir.SSR no.1:117-127 '58. (MIRA 12:2)
(Osh Province--Physical geography) (Osh Province--Agriculture)

GLUSHKOVA, M. I.

Main features of the orography and geomorphological division of
the southern Kirghizistan. Izv. AN Kir. SSR. Ser. est. i tekhn.
nauk 1 no.2:21-33 '59. (MIRA 13:9)
(Fergana Valley--Physical geography)

GLUSHKOVA, M. I.; GRIGORENKO, P.G.

Natural conditions of the Batken depression and prospects for the utilization of its underground waters. Izv. AN Kir. SSR. Ser. est. i tekhn. nauk 1 no.2:53-62 '59. (MIRA 13:9)

(Batken Districts—Geography)
(Batken District—Water, Underground)

GLUSHKOVA, M.I.; DANILINA, A.P.

Main features of the relief of the southwestern slopes of
the Fergana Range. Izv. AN Kir. SSR, Ser. est. i tekhn.
nauk 2 no.10:49-60 '60. (MIRA 17:3)

GLUSHKOVA, M. I., CAND GEOG SCI, "NATURAL CONDITIONS OF
THE PIEDMONDS OF THE SOUTHERN PART OF OSHSKAYA OBLAST, IN
CONNECTION WITH THE DEVELOPMENT OF COTTON GROWING." MOS-
COW, 1961.(ACAD SCI USSR, INST OF GEOGRAPHY). (KL-DV,
11-61, 212).

-55-

GRIGORENKO, P.G.; GLUSHKOVA, M.I.; OTORBAYEV, K.O.

Natural conditions, hydrogeological characteristics, and ways
for the economic utilization of the Kugart Valley. Izv. AN Kir.
SSR. Ser. est. i tekh. nauk 4 no.3:83-100 '62. (MIRA 15:11)
(Kugart Valley--Geology)
(Kugart Valley--Economic conditions)

"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2

BLACK CROWSON, J.R.; CHURCHILL, G.

Geographical distribution of may beetles in the Tien Shan, Tadzhikistan
Kirgizia, Tadzhikistan' by Zekayer. fiz.-geogr. sta. no.5.
(MFA 19:10)
130-141 '61.

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DEREVITSKAYA, V.V.; GIUSHKOVA, N.R.

Diphasic meningoencephalitis in Moscow Province. Zbir.mikrobiol.enid.
i immun. 29 no.2:30-44 F '59. (NIRA 11:4)

1. Iz Moskovskoy oblastnoy sanitarno-epidemiologicheskoy stantsii.
(MENINGOENCEPHALITIS, epidemiology,
diphasic, in Russia (Rus))

NEVROVSKAYA, ALEXANDRA Vasil'evna, SIEPENKAI, A.S., GLUSHKOVA, M.R.

Information regarding the case of M. G. who is suffering from leprosy in
Vladivostok, Russia, prepared by the USSR Ministry of Health, No. F 165.
(MIRA 18:3)

The information was obtained by parasitologists of the Leningrad Research Institute of Le-
prosy and other diseases of the skin, Dr. N. N. Klykova, Director, Vladivostok
and Tikhvin, Russia, and Dr. N. N. Klykova, Director, Moscow.

GLUSHKOVA, M.T.

Gas analysis in the chlorination processes

Edward and M. T. Chalikow. Production 21, No. 11

(1957) Chlorination is used in the production of organic and inorganic salts and organic compounds, especially chlorine, CO₂, CO, COCl, COCl₂, etc. The total chlorine content of the gases from chlorination can be determined by cooling them to below their

In duplicate results were 0.1% apart. W. M. Sterbing

Mt

GLUSHKOVA, N. A.

✓ The white-muscle disease in calves. A. P. Onegov, M. F. Mel'nikov, and N. A. Glushkova (Agr. Inst. Kirov). Veterinariya 33, No. 3, 65-8 (1965). --The so-called white-muscle disease in cows, calves, and pigs is enzootic, and is connected with deficiencies in Co, Cu, Mn and I; the vitamin A, B₁, and C deficiency is a contributory factor.
G. M. Kosolapoff

3

Card 2/2

U.S.R / Farm animals. Small Horned stock.

G-3

Abstr Jour: Ref Zhur-Biol., No 23, 1958, 105701.

Author : Glushkova, M. A.

Inst : Kirov Agricultural Institute.

Title : Significance of Food Supplementation with Trace Elements in Sheep breeding. Report I. Effect of Food supplementation with Trace elements (Cobalt, Copper and Iodine) on Morphology of Blood and Productivity of Sheep.

Orig Pub: Tr. Kirovskogo s.-kh. in-ta, 1957, 12, No 24, 1-3-196.

Abstract: The second group of sheep (30 heads), in addition to the basic ration (first group), was given daily per head 3 mg. of cobalt chloride and 8 mg. of copper sulfate. The third group (60 heads) was given 10 g. of iodized salt in

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L 32108-65

ACCESSION NR: AB5005748

in the cloud above the level of the maximum speed of the ascending stream at

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CIA-RDP86-00513R000515430001-2"

AMERICAN
REF ID: A1(1) GM
ACC NBR AT6027420

SOURCE CODE: UR/3213/66/000/003/0129/0139

//

AUTHOR: Glushikova, N. I.

ORG: none

TITLE: A method for forecasting hail and torrential rain

SOURCE: Leningrad. Vysokogornyy geofizicheskiy institut. Trudy, no. 3(5), 1966.
Mechanizm obrazovaniya i vypadeniya grada (Mechanism of the formation and precipitation of hail), 129-139

TOPIC TAGS: hail, rain, cloud physics, climate control, weather forecasting

ABSTRACT: VGI, through a careful study of the processes of precipitation formation, has developed a new method of influencing convective clouds in order to prevent hail precipitation. The conditions necessary for hail formation are listed, and were used to construct graphs which are the basis for determining the type of precipitation to be expected for the particular condition prevailing. A mass of aero-synoptic material for days with hail and torrential rainfall in the northern Caucasus, the trans-Caucasus, the Ukrainian SSR and Moscow Oblast' was assembled and analyzed in order to verify the correctness of the conditions established for the graphical construction. The results of the analysis are charted. The high order of vindication of the method confirmed the correctness of the physical prerequisites

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L 09307-57

ACC NR: AT6027420

which are the basis for the method, and, accordingly, the correctness of the ideas on the mechanism involved in the formation of torrential downpours and hail developed by the VGI. Orig. art. has: 12 formulas, 6 figures and 3 tables.

SUB CODE: 04 / SUBM DATE: none / ORIG REF: 007 / OTH REF: 002

USPENSKAYA, L.N.; GLUSHKOVA, N.P.; BERGMAN, A.G.

Reciprocal solubility of salts in the system of barium and calcium chlorides and nitrates from complete freezing to + 60°. Zhur. ob. khim. 25 no.9:1658-1673 S '55. (MIRA 9:2)

1.Rostovskiy-na-Donu gosudarstvennyy universitet.
(Barium salts) (Calcium salts)

GLUSHKOVA, N.I.; LAPCHEVA, V.F.

Forecasting showers and hail forming in air-mass cumulus congestus
clouds. Trudy Vysokogor. geofiz. inst. AN SSSR 2:195-198 '61.
(MIR: 14:12)

(Precipitation (Meteorology))

YAKOVLEVA, Ol'ga Sergeyevna; GLUSHKOVA, N.V., red.; SMIRNOVA, M.I.,
tekhn. red.

[School experiments and laboratory work for the course in human
anatomy and physiology] Shkol'nye opyty i laboratornye zaniatiia
po kursu anatomii i fiziologii cheloveka; posobie dlia prepoda-
vatelei biologii srednei shkoly. 2. izd. Moskva, Gos. uchebno-
pedagog. izd-vo M-va prosv. RSFSR, 1961. 167 p.

(MIRA 15:5)

(Anatomy, Human--Study and teaching)
(Physiology--Study and teaching)

USSR Organic Chemistry. Synthetic Organic Chemistry.

E-2

Abstr Jour: Ref Zhur-Khimiya, No 6, 1957, 19254

Author : Dolgov B. N., Golodnikov G. V., Glushkova N. Ye.

Inst : ~~Institute of Chemistry~~

Title : Conversion of Tetraethylsilane over a Chromium Catalyst.

Orig Pub: Zh. obshch. khimiyi, 1956, 26, No 6, 1688-1691

Abstract: At 530-600° tetraethylsilane (I) over a chromium catalyst in an atmosphere of H_2 is decomposed into triethylsilane and SiH_4 . At 600-630° a deep hydrogenolysis ensues with the formation of C_2H_6 and Si. Dehydration of I to triethylvinylsilane is not observed.

Card : 1/1

AUTHORS:

Dolgov, E. N., Kharitonov, M. P.,
Glushkova, N. Ye., Khudobin, Yu. I.

SAC 73-26-10-17, 6.

TITLE:

Catalytic Dehydro Condensation of the Trialkyl Silanes
With Alcohols in the Presence of Metal Chlorides
(Kataliticheskaya degidrokondensatsiya trialkilsilanov so
spirtami v prisutstvii khloridov metallov)

PERIODICAL:

Zhurnal obshchey khimii, 1958, Vol 28, Nr 10, pp 2710-2712,
(USSR)

ABSTRACT:

The authors continued their investigations of the previous paper on the catalytic dehydro condensation of the above-mentioned silanes with oxy, oxo and polyoxy-organic compounds. Earlier they used alkali alcoholates as catalysts for this condensation of R_3SiH with alcohols (yields 60-90 %). In the present paper moreover some small additions of various metal chlorides are used, of which $ZnCl_2$ and $SnCl_2$ proved to be the most active. The reaction velocity of R_3SiH with alcohols depends on the nature and the quantity of metal chlorides. The increase of the amount of chlorides from 0,05 to 1 gr. leads to the increase of the reaction velocity, whereas the further addition has no more influence. The reactions of methanol with

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Catalytic Dehydro Condensation of the Trialkyl Silanes 307 79-28-10-10 KC
With Alcohols in the Presence of Metal Chlorides

triethyl silane at a ratio of 2:1 (Table 1) prove this. The increase in length of the alkyl radicals from CH_3 to $n\text{-C}_4\text{H}_9$ in alcohols of normal structure decreases the reaction velocity (Table 2, Experiments 1-3, 5). The difficulties in the spatial arrangement in the case of the presence of radicals of the larger structure considerably decrease the reaction velocity (Table 3). The structure of the trialkyl silane exerts an important influence on the reaction velocity (Table 3). 13 trialkyl alkoxy silanes, 7 of which are new, were synthesized. The physical properties of the newly synthesized trialkylalkoxy silanes are given in Table 4. The method described is of general character for the alkoxylation of the Si-H bond, and makes it possible to obtain the trialkylalkoxy silanes in pure state. No side products are formed. There are 5 tables and 4 references, 2 of which are Soviet.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR
(Institute of the Chemistry of Silicates of the Academy of Sciences, USSR)

Card 2/3

Catalytic Dehydro Condensation of the Trialkyl Silanes 397,79-26-10-17,60
With Alcohols in the Presence of Metal Chlorides

SUBMITTED: July 29, 1957

Card 3/3

SLU

12046
S/062/60/000/02/11/012
R005/F066

5 3700

AUTHORS: Dolgov, B. N., Glusnikova, N. Ye., Kharitonov, N. P.

TITLE: Some Properties of p-Trimethyl-silyl-benzaldehyde

PERIODICAL: Izvestiya Akademii nauk SSSR Otdeleniye khimicheskikh nauk 1960, No. 2, pp. 391 - 395

TEXT: p-trimethyl-silyl-benzaldehyde gives reactions specific for the carbonyl group (silver mirror reaction, reaction with Schiff's reagent) and addition compounds with sodium bisulfite, 2,4-dinitro-phenyl hydrazine, semicarbazide, hydroxylamine, ammonia, and aromatic amines. In their experiments the authors obtained the bisulfite compound, the semicarbazone, and the oxime of p-trimethyl-silyl-benzaldehyde, the tri-(p-trimethyl-silyl)benzaldiamine and the p-trimethyl silyl-benzal aniline. Method of preparation and properties of the above compounds are described. The authors believe that the preparation of silicon-containing dyes of the triphenyl-methane series will be possible. There are 6 references: 1 Soviet and 5 American and English.

X

Card 1/2

Some properties of polybenzene
-benzaldehyde

S/002/100/00/02/11/012
B003/B066

ASSOCIATION: Institut khimii silikatov Akad. Nauk SSSR (Institute of
Silicate Chemistry of the Academy of Sciences USSR)

SUBMITTED: July 2, 1959

Card 2/2

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WASHINGTON, D.C.
FOR THE USE OF THE
FEDERAL BUREAU OF INVESTIGATION
U.S. DEPARTMENT OF JUSTICE
WASHINGTON, D.C.
INVESTIGATOR: [REDACTED]
SUBJECT: [REDACTED]

APPROVED FOR RELEASE: 09/24/2001

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"APPROVED FOR RELEASE: 09/24/2001

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the following reaction scheme. The first step is the condensation of a substituted benzene derivative with a substituted benzene derivative. This is followed by a second step, which is the cyclization of the resulting intermediate. The final product is a substituted benzene derivative.

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CIA-RDP86-00513R000515430001-2"

Condensation of α -trimethyl silyl...

250L3
S/062/61, 001/004/005 C1C
B118/R000

Yu. N. Platonov is thanked for his assistance in making the analyses. There are 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The two references to English-language publications read as follows: 1) A. I. Vokell, J. Chem. Soc. 1948 (1938); A. I. Vokell et al., J. Amer. Chem. Soc. 1952, 514. 2) R. G. Seversen, R. I. Rossouw et al., J. Amer. Chem. Soc. 79, 6540 (1957).

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR (Institute of Silicate Chemistry of the Academy of Sciences USSR)

SUBMITTED: July 4, 1960

Card 3/3

GLUSHKOVA, N.Ye.; KHARITONOV, N.P.

Interaction between p-trimethylsilylbenzaldehyde and organomagnesium
compounds. Izv.AN SSSR. Ser.khim. no.1:78-83 Ja '64.

(MIRA 17:4)

l. Institut khimii silikatov im. I.V.Grebenshchikova AN SSSR.

GLUSHKOVA, N.Ye.;KHARITONOV, N.P.

Reaction of p-trimethylsilylbenzaldehyde with acids and their
derivatives. Izv. AN SSSR Ser. khim. no.11:2074-2076 N '64
(MIRA 18:1)

1. Institut khimii silikatov im. I.V. Grebenshchikova AN SSSR.

L 3183-66 ENT(m)/ETC(f)/EMF(j)/T RM/DS
ACC NR: AP6012535 (A) SOURCE CODE: UR/0062/66/000/003/0564/0566

AUTHOR: Glushkova, N. Ye.; Kharitonov, N. P.

ORG: Institute of Chemistry of Silicates im. I. V. Gredenshchikov, Academy of Sciences SSSR (Institut khimii silikatov Akademii nauk SSSR)

TITLE: Reaction of benzaldehyde with alkyl (aryl) chlorosilanes 1

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 3, 1966, 564-566

TOPIC TAGS: organic synthesis, silane, silicon compound, UV irradiation

ABSTRACT: The present reproduces the preliminary results obtained during the reaction of benzaldehyde with phenyltrichlorosilane and methylphenyldichlorosilane and studies the effect of temperature, ultraviolet light and $NiCl_2$ on these reactions. During the addition of excess benzaldehyde and irradiation with ultraviolet light for 12 hrs, the main reaction products were organochlorodisiloxanes. It was found that during ordinary heating of the reaction mixture for 20 hrs the reaction proceeds to the extent of 5-7%. The addition of catalytic amounts of $NiCl_2$ increased formation of organochlorodisiloxanes (under the same conditions) to the extent of

Card 1/2

UDC: 542.91 + 546.287

L 31883-66

ACC NR: AP6012535

9-14%. When SnCl_2 and, in particular, ZnCl_2 are used as catalysts, the reaction mixture turns to tar. Ultraviolet irradiation also helps the reaction of the formation of organochlorodisiloxanes. In all cases $\text{C}_6\text{H}_5\text{SiCl}_3$ is more reactive with benzaldehyde than $(\text{CH}_3)(\text{C}_6\text{H}_5)\text{SiCl}_2$. During the reaction of $p-(\text{CH}_3)\text{CC}_6\text{H}_4\text{CHO}$ with $\text{C}_6\text{H}_5\text{SiCl}_3$ and $(\text{CH}_3)(\text{C}_6\text{H}_5)\text{SiCl}_2$ in the presence of NiCl_2 (under conditions similar to the reaction of benzaldehyde), the yield for both chlorides was higher. As a result of the conducted reactions two organochlorodisiloxanes were isolated and characterized: 1,3-diphenyl-1,1,3,3-tetrachlorodisiloxane and 1,3-dimethyl-1,3-diphenyl-1,3-dichlorosiloxane. Orig. art. has: 2 tables.

SUB CODE: 07/ SUBM DATE: 23Jul65/ ORIG REF: 003/ OTH REF: 005

Card 2/2 *AC*

KAZITSYNA, L.A.; LOKSHIN, B.V.; GLUSHKOVA, G.A.

Determination of the nitrile group from infrared spectra.
Aminonitrile hydrochlorides. Zhur.ob.khim. 32 no.5:1391-1395
My '62. (MIRA 15:5)
(Nitriles-Spectra)

OKUNTSOV, M. M.; GOL'D, V. M.; GLUSHKOVA, R. I.

Participation of xanthophylls (violaxanthin and lutein) in the
process of photosynthesis. Nauch. dokl. vys. shkoly; biol. nauki
no.3:129-132 '62. (MIRA 15:7)

1. Rekomendovana kafedroy fiziologii i biokhimii rasteniy i
laboratoriyyey fotosinteza Tomskogo gosudarstvennogo universiteta
im. V. V. Kuybysheva.

(PHOTOSYNTHESIS) (XANTHOPHYLL)

L 16"33-65 EWT(1)/EMP(e)/EPA(s)-2/EMT(m)/EEC(t)/EEC(b)-2/EMP(t) Pg-1/Pt-10
IJP(c)/ESD(dp)/ESD(gs)/ESD(t)/AS(mp)-2/AFMD(t) CG/MH
ACCESSION NR: AP5000290 S/0070/64/009/006/0864/0869

AUTHORS: Zubov, V. G.; Firsova, M. M.; Glushkova, T. M.

TITLE: Kinetics of the variation of the dielectric constant of quartz under the influence of a constant electric field

SOURCE: Kristallografiya, v. 9, no. 6, 1964, 864-869

TOPIC TAGS: quartz, dielectric constant, temperature variation, impurity content

ABSTRACT: This is a continuation of an earlier investigation by the authors (Kristallografiya v. 8, No. 1, 112--114, 1964) of the anomalous behavior of the temperature variation of the dielectric constant ϵ_{33} of quartz. The present study is devoted to the kinetics of the variation of the dielectric constant at frequencies 1 Mcs and 1 kcs when a constant electric field is applied. The tests were made at 300--700C, and the setup employed is illustrated in Fig. 1 of the

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enclosure. The results have disclosed a hitherto unobserved phenomenon, namely that the dielectric constant begins to increase rapidly following the application of the constant electric field, passes through a maximum, after which it decreases slowly to a value corresponding to the dielectric constant at room temperature. The value, form, and time of reaching the maximum depend on the temperature and on the electric field applied. A satisfactory and noncontroversial interpretation of all the observed peculiarities can be made only by using the theory of A. F. Ioffe (Izv. Petrogradskogo politekhn. in-ta XXIV, 1915, pp. 62--126), whereby the impurity ions, which are always present in the quartz, enter directly into the structure of the crystal. These dissociated ions have sufficient mobility to participate in all the electric processes occurring in the crystal when the electric field is applied. Orig. art. has: 5 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V.

Card 2/4

L 16583-65
ACCESSION NR: AP5000290

Lomonosova (Moscow State University)

SUBMITTED: 17Mar64

SUB CODE: ss,EM

NR REF Sov: 004

ENCL: 01

OTSER: 004

Card 3/4

L 16583-65
ACCESSION NR: AP5000290

ECCLOSURE: 01

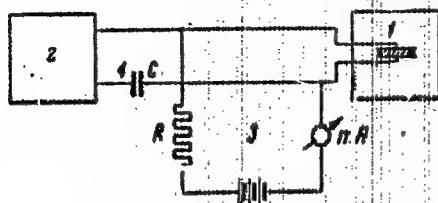


Fig. 1. Diagram of experimental setup.

1 - Holder with sample in oven, 2 - instrument for measurement of capacitance, 3 - electric cleaning circuit, 4 - decoupling capacitor

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G. BOSHKOVIA, V.B.

4

Chromium dioxide, its preparation, properties, and enthalpy of formation. S. M. Artyuk, S. A. Shchukarev, and A. B. Glushkova. *Zhur. Obshchei Khim.*, 23, 1291-5 (1953). Cr₂O₃ formed by the decompr. of CrO₃ at 420-430° under an O₂ pressure of 200-300 atm., has a tetragonal crystal structure and the dimensions of the elementary cell are $c = 5.77 \pm 0.02$ Å, $a = 4.394 \pm 0.15$ Å, ($c/a = 1.31$). The cell contains 4 Cr atoms and 8 O atoms. Cr₂O₃ is ferromagnetic with a Curie temp. of 115°. Values of the magnetic permeability above the Curie temp. show that the compnd. is a true dioxide and not a mixed oxide (Cr₂O₃ + CrO₂). The enthalpy for the formation of Cr₂O₃ is 130.4 ± 0.5 kcal. [J. Reyer Leach]

ARIYA, S.M.; SHCHUKAREV, S.A.; GLUSHKOVA, V.B.

Sublimation enthalpy of chromic and molybdic anhydrides. Zhir.
ob.khim.23 no.12:2063-2066 D '53. (MLRA 7.2)

1. Leningradskiy Gosudarstvennyy ordena Lenina universitet im.
A.A.Zhdanova. (Enthalpy) (anhydrides)

Category: USSR / Physical Chemistry - Kinetics. Combustion.
Explosives. Topochemistry. Catalysis.

B-9

Abs Jour: Referat Zhur-Khimii, No 9, 1957, 30039

Author : Keler E. K., Glushkova V. B.

Inst : not given

Title : Conditions of Formation of Barium Silicates

Orig Pub: Zh. neorgan. khimii, 1956, 1, No 10, 2283-2293

Abstract: By means of thermal, chemical, x-ray diffraction and microscopic methods of analysis, it was ascertained that on heating of mixtures of different composition, of the system BaCO_3 (I) - SiO_2 (II), regardless of the composition of the initial mixture, the interaction between I and II begins only at 700° , with formation of barium metasilicate (III). At temperatures of 800° and above, barium orthosilicate (IV) is formed. In mixtures containing much I, at about 1000° , is formed, in addition to IV, also tribarium silicate. In mixtures containing much II, formation of III is observed only

Card : 1/2

-13-

Category: USSR / Physical Chemistry - Kinetics. Combustion.
Explosives. Topochemistry. Catalysis.

B-9

Abs Jour: Referat Zhur-Khimika, No 9, 1957, 30039

above 1100°. Formation of $\text{Ba}_2\text{Si}_2\text{O}_7$ and BaSi_2O_7 , by reactions in the solid phase, does not occur. It was found that decrease in volume of samples of I, which is noted at 600-800°, is due to decrease in porosity as a result of collective crystallization, and not to a polymorphous transformation. Increase in volume of samples of I and II at 1000-1200°, is due to increase in porosity of the samples, as a result of "swelling" of emitted CO_2 in the presence of liquid phase, and due to the fact that the reaction products have a larger molecular volume than the initial substances.

Card : 2/2

-14-

Gloshkova, V.B.

Conditions for the formation of barium silicates.
Reaction of barium peroxide with silicon (By V. B. Gloshkova and N. A. Kuznetsov, *Zhur. Neorg. Khim.*, 1967, v. 12, p. 1001-0 (1967); cf. C. A., 61, 6012).—The method of complex thermal analysis (Keiter and Kuznetsov, *C. A.*, 1966, 64, 12614c), microscopic, x-ray, and chem. analysis were used to study the reaction in the $BaO-SiO_2$ system over a wide range of different compositions ($[BaO]:[SiO_2] \sim 3:1, 2:1, 1:1, 1:2$). In all mixts., regardless of composition, the metasilicate or mixed acid silicates, $BaSiO_3$ and Ba_2SiO_5 , are formed first and only upon addnl. heating in the orthosilicate formed. In mixts. rich in BaO , Ba_2SiO_5 tends to form at 750-800°. In mixts. rich in SiO_2 , the basic silicate which are formed react with the excess SiO_2 at high temp. to form more acid silicates. The formation of barium orthosilicate from SiO_2 and the metasilicate from barium orthosilicate takes place at 1000-1100°. P. Rovinskaya

"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2

Gusl'kova, V. B.

Distr: S/1
Conditions for the formation of the coalition
III. Preparation and projection of the coalition
Navy

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2"

"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2"

GLUSHKOVA, V. B.

AUTHOR: None Given 30-58-4-32/44

TITLE: Dissertations (Dissertatsii)
Branch of Chemical Sciences. (Otdeleniye khimicheskikh
nauk).
July-December 1957 (Iyul'-Dekabr' 1957.)

PERIODICAL: Vestnik Akademii Nauk SSSR, 1957, No. 6,
pp. 117-118 (SSSR)

ABSTRACT: 5) At the Institute of Silicate Chemistry (Institut
khimii silitatov) the following dissertations were
defended:
a) for the degree of a Candidate of Chemical Sciences:
V. B. Glushkova - Determination of the Interactions in
Solid Phases Between Silicon Dioxide and
Oxides, As Well As Carbonates of Calcium,
Strontium and Barium. (Izuchenie vzaimo=
deystviya v tverdykh fazakh mezhdu dvukimi =
yu kremniya i okislami i karbonatami kal'i=
tsiya, strontsiya i bariya).

Card 1/4 R. G. Grebenchikov - The Physico-Chemical Investigation

Dissertations Branch of Chemical Sciences.
July-December 1957

158 - 1-50/12

of a Part of the Triple System
 $\text{NaF}-\text{RbF}-\text{BeF}_2$ and Its Analogy to the
 $\text{CaO}-\text{BaO}-\text{SiO}_2$ System. (Fiziko-khimicheskie issledovaniya nauchno-tekhnicheskikh sistem $\text{NaF}-\text{RbF}-\text{BeF}_2$ i yeye analogii s sistemy $\text{CaO}-\text{BaO}-\text{SiO}_2$).

- b) For the degree of a Candidate of Technical Sciences:
L. A. Kiyler - Investigation of the Configuration and Crystallization of Ash-Containing Slates Fusions (Issledovaniye protsessov obrazovaniya i kristallizatsii slantsezol'nykh rasplavov)
c) At the Institute for Chemical Physics (Institut khimicheskoy fiziki) the following dissertations were defended:
a) for the degree of a Doctor of Technical Sciences:
A. N. Voinov - Investigation of the Detonation and of the Spontaneous Ignition Under Conditions of a Light-Fuel Engine. (Issledovaniye detonatsii i samovosplameneniya v usloviyakh dvigatelya legkogo topliva).

Card 2/4

Dissertations Branch of Chemical Sciences.
July-December 1957

50-28-4-38/4

- b) for the degree of a Candidate of Chemical Sciences:
V. I. Vedeneyev - Energy of the Break of Compounds in
Organic Molecules and Their Utilization
in Chemical Kinetics. (Energiya razryva
svyazey v organicheskikh molekulakh i
ikh ispol'zovaniye v khimicheskoy kine-
tike).
c) for the degree of a Candidate of Physics-Mathematical Sciences:
Ye. L. Frankevich - Mass-Spectrometrical Investiga-
tion of Elementary Ionic-Molecular
Processes in the Gas Phase. (Mass-
-spektrometricheskoye issledovaniye
elementarnykh ionno-molekulyarnykh
protsessov v gazovoy faze).
7) At the Radium Institute imeni V. G. Khlopinia (Radiyeviy
institut imeni V. G. Khlopinia) the following disserta-
tions for the degree of a Candidate of Physico-
Mathematical Sciences were defended:

Card 3/1

Dissertations. Branch of Chemical Sciences.
July -December 1957

50-58-1 12/44

- K. Ya. Gromov - Conversion Electrons of Lutetium and
Thulium Isotopes Deficient in Neutrons
(Konversionnyye elektrony neytronodefis-
itnykh izotopov lyutetsiya i tuliya)
O. V. Lezhkin - Multi-Charged Particles in Nuclear fis-
sions Caused by Protons with an Energy of
300-600 MeV. (Mnogozaryadnyye chastitsy
v yadernykh rasshchepleniyakh, vyzvavemye
protonami s energiyey 300-600 meV).

1. Chemistry—Bibliography 2. Bibliography—Chemistry

Card 4/4

GLUSHKOVA, V.B., KEIER, E.K.

Conditions of the preparation and rates of formation of barium silicates. Zhur. neorg. khim. 5 no.4:882-890 Ap '60.
(MIEA 13:7)

1. Institut khimii silikatov Akademii nauk SSSR.
(Barium silicate)

152100 1142, 1273, 1153
21/310

S/080/61/034/001/017/020
A057/A*29

AUTHORS: Sergeyeva, V.I., Glushkova, V.B., Keler, E.K.

TITLE: Physical and Technical Properties of Barium and Strontium Silicates

PERIODICAL: Zhurnal Prikladnoy Khimii, 1961, Vol. 34, No. 1, pp. 212-214

TEXT: Synthesis and sintering of single barium and strontium silicates with mineralization admixtures were investigated, and the physical and technical properties of the sintered samples were determined. Concretes containing these silicates have a greater resistance to sea water, they are heat-resistant and have X- and gamma-ray shielding properties. Besides, these silicates are used for special ceramics and phosphors. Nevertheless they are insufficiently studied. Hadley et al. [Ref.2: J.Applied Physics,27,11,1384 (1956)] briefly reported on some physical properties of barium orthosilicate. The present authors determined in previous investigations [Ref.3: ZhNKh,1,10,2283 (1956), Ref.4: ZhPKh,30,4,517 (1957)] formation conditions of barium- and strontium-silicates. In the present work the silicates were synthesized from dry silicic acid and barium- as well as strontium-carbonate in silite ovens

Card 1/6

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S/080/61/034/001/017/020
A057/A129

Physical and Technical Properties of Barium and Strontium Silicates

at 1,200°-1,400°C. The sintered material was milled by batches after each 4 hrs of sintering, briquetted (at 200 atm pressure) and sintered again to accelerate synthesis of the components. Duration of the total sintering process was 32-56 hrs. The synthesized silicates were sieved and articles were pressed at 500 atm adding 7-10% of kerosene by weight to decrease lamination of the material. The articles were fired at different temperatures, and the physical and mechanical properties were determined. In order to obtain samples of small porosity, mineralizers (Na_2CO_3 , BaCl_2 , ZnO , SrCl_2 , MgF_2 , B_2O_3 , and Al_2O_3) in amounts of 1-1.5% of weight were mixed with the synthesized silicates. The strongest influence have Al_2O_3 and B_2O_3 admixtures (the latter on Ba_2SiO_4). They form a liquid phase at 1,350°-1,400°C by melting of the eutectic in this ternary system. According to these results Al_2O_3 and B_2O_3 admixtures were used to prepare sintered samples. Physical and technical properties of the investigated samples demonstrate (see Table) that additions of Al_2O_3 and B_2O_3 in the amount of 1-1.5% by weight decrease porosity, increase mechanical strength (except $\text{Ba}_2\text{SiO}_4 + 1\% \text{B}_2\text{O}_3$) and the modulus of elasticity and bending. Al_2O_3 admixtures practically do not change the heat-re-

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S/080/61/034/001/017/020
A057/A129

Physical and Technical Properties of Barium and Strontium Silicates

sistance of the material. The dielectric constant increases with BaO- and SrO-content in the silicate. Barium silicates have a lower temperature coefficient of dielectric constant. The present investigation demonstrates that improvement and increase in mechanical properties of barium- and strontium-silicates were effected by sintering with admixtures of mineralizers. There are 1 table and 4 references: 2 Soviet-bloc, 2 non-Soviet-bloc.

ASSOCIATION: Institut khimii silikatov AN SSSR (Institute for Silicate Chemistry of the AS USSR)

SUBMITTED: May 10, 1960

Card 3/6

MATVEYEV ' A., prof., doktor tekhn. nauk, otv. red.; BUDNIKOV
P.P., kaderik, red.; TOKOPOV, N.A., red.; GLUSHKOVA,
V.B., kand. khim. nauk, red.; ZUYEVA, V.F., nauchn. red.

[Silicates and oxides in the chemistry of high temperatures]
Silikaty i okisly v khimii vysokikh temperatur. Moskva, In-
t khimii silikatov im. I.V.Grebenshchikova. 1963. 382 p.
(NPA 17:12)

S. Akademiya nauk Ukr.SSR (for Budnikov). Z. Odessa
korrespondent AN SSSR (for Tokopov).

S/030/63/000/003/013/014
B117/B186

AUTHORS: Toropov, N. A., Corresponding Member AS USSR, Glushkova, V. B., Candidate of Chemical Sciences

TITLE: Silicates and oxides in high-temperature chemistry
(Conference in Leningrad)

PERIODICAL: Akademiya nauk SSSR. Vestnik, no. 3, 1963, 134-135

TEXT: From November 21 to 24, 1962 a conference took place in Leningrad on the study of the behavior of substances at high temperatures and on pertinent experimental methods. The conference had been convened by the Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry imeni I. V. Grebenshchikov of the Academy of Sciences USSR) and was attended by representatives of 82 scientific research institutions, universities and, industrial enterprises from more than 20 towns of the USSR. The director of the Institute, Corresponding Member N. A. Toropov, gave a survey on the present state of the investigations into the physical and chemical properties of ceramic substances in the USSR. N. V. Below spoke about the crystallo-

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S/030/63/000/003/013/014
B117/B186

Silicates and oxides in high...

chemical explanation of some characteristic features in the behavior of oxides at high temperatures. S. M. Ariya and M. P. Morozova dealt with the rules governing the changes in phase composition in systems "transition metal - oxygen" with temperature increase. The synthesis and the properties of compounds of rare and rare-earth elements and the effect of the gaseous medium on reactions in solid phase in systems with oxides of different valencies was dealt with by A. I. Leonov, N. A. Godina, I. A. Bondar', V. A. Bron, N. V. Semkina, Ya. I. Smagina. The effect of Ba^{+2} , Ca^{+2} , and Be^{+2} in quantities of 0.1 - 0.5 atom%, the kinetics of mullite formation in aluminosilicate mixtures jointly precipitated were reported by P. P. Budnikov, T. N. Keshinyan, A. V. Volkova. The study of silicates of the alkaline earth metals was described by N. G. Grebenushchikov, L. Ya. Markovskiy, A. A. Kolpakov, Yu. P. Sapochnikov. Studies of the thermodynamic properties of oxides and salts by the electrochemical method at 800 - 1150°C were reported by T. N. Resukhina, V. A. Levitskiy, A. N. Golubenko. The diffusion of molybdenum and iron into various materials was treated by A. I. Borisenko, V. I. Izvekov and N. S. Gorbunov. So was the analysis of thermodynamic calculations of reactions in solid phase at high

temp. 2/4

S/030/63/000/003/013/014
B117/B186

Silicates and oxides in high...

temperatures by V. B. Glushkova. Problems in the breeding of monocrystals of different silicate substances were dealt with at a special meeting by S. G. Tresvyatskiy, A. D. Fedoseyev, L. G. Grigor'yeva, T. A. Makarova, D. P. Grigor'yev. Also, Ya. V. Klyucharev spoke about the studies of phase transformations and properties of high-temperature compounds; G. V. Kukolev, M. T. Mel'nik, N. N. Shapovalova about the properties of low-basic calcium aluminates; A. K. Yarklit, Ye. R. Skuya, L. A. Kosheleva, B. A. Polonskiy on the sintering and the crystallization of molten quartz in hot pressing. Lectures on apparatus: N. V. Golubtsov "Some instruments for studying vacuum processes"; P. F. Rumyantsev "Application of the high-temperature microscope for studying silicates". Lectures on methods: E. K. Keler: on the application of complex thermography for studying high-temperature processes; V. V. Fesenko, A. S. Bolgar: on the investigation of physical and physico-chemical properties of low-melting compounds at 3500°K; E. E. Shpilman; A. Ye. Shchynlin, N. V. Boyko, V. Ya. Chekhovskoy, V. A. Petrov, on the determination of the thermal conductivity at 1500°C and some thermo-physical properties up to 2500°C; S. F. Pal'guyev A. D. Neuymin spoke

Card 3/4

Silicates and oxides in high-...

S/030/62/000/003/013/014
B117/B186

about the investigation of the nature of conductance and conductivity of highly refractory oxides. In this conference a large contribution was made to the coordination of the work of scientific research institutions, universities, and industrial enterprises in the field of silicates and oxides in high-temperature chemistry.

Card 4/4

GLUSHKOVA, V.B.; KELER, E.K.

Polymerization of lanthanum oxides. Dokl. AN SSSR 154 no. 3 pp. 614-616
S 163.
(MIRA 1612)

1. Institut khimii silikatov im. I.V.Grebenchukova AN SSSR.
Predstavleno skrivenikom A.V.Frunzaym.

ACCESSION NR: A#4039617

S/0076/64/038/005/1126/1134

AUTHORS: Glushkova, V.B. (Leningrad); Sokolov, Yu.G. (Leningrad);
Keler, E.K. (Leningrad)TITLE: Oxidation of metallic neodymium and the rate of the C \rightarrow A
polymorphic transformation of Nd sub 2 O sub 3

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 5, 1964, 1126-1134

TOPIC TAGS: neodymium oxidation, neodymium oxidation rate, neodymium
sequioxide, neodymium sequioxide A, neodymium sequioxide O, neo-
dymium oxide C-A transformation, neodymium oxide crystal lattice,
neodymium sequioxide stable form, anion vacancy, cation vacancyABSTRACT: The oxidation rate of powdered Nd was studied in the air
and in thoroughly dried oxygen. The equipment, which is described
and figured, was set up so as to provide for continuous weighing of
the 0.1 - 0.3 g sample at 1.10⁻¹ to 760 mm Hg pressures and 20-1500°C
temperatures. In preliminary tests with oxygen it was found that at
an oxygen pressure of over 10 mm Hg the oxidation rate does not
depend upon further pressure changes. Thus tests were then conducted
at 100 mm pressure. The results are tabulated and graphed. At 240-

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ACCESSION NR: AP4039617

3000 temperatures the oxidation rate showed linear dependency; this decreased as the oxide layer increased so as to become a parabolic curve. In dry oxygen the constant of the oxidation rate was found: $C = 6 \cdot 10 \cdot 10^9 \text{ min}^{-1}$ and the activation energy $E = 38.93 \pm 0.05 \text{ kcal}$. The A-form was produced upon oxidation in dry oxygen at 250 - 5000 (X-ray determination) and was the only stable form of the sesquioxide up to 1200C. In another series of tests investigation the change C → A Nd_2O_3 at various temperatures the cubic form was used as starter material. The change was shown to occur at 800-1000C and did not reverse upon subsequent cooling. The rate of transformation C → A depended upon the degree of perfection of the crystal lattice of the metastable C-form. Lesser perfection resulted in transformation at lower temperatures. The activation energy of the 99.9% pure specimen was $E = 100.26 - 0.04 \text{ kcal}$ and the constant $C = 1.03 \cdot 10^{16} \text{ min.}^{-1}$. Orig. art. has: 6 tables, 6 figures and 4 formulas.

ASSOCIATION: Institut khimii silikatov im. I.V. Grebenchshikova AN SSSR
(Institute of Silicate Chemistry, AN SSSR)

SUBMITTED: 26Apr63
SUB CODE: GC, IC
Card

ENCL: 00
NR REF Sov: 006

OTHER: 011

Card 1/2

L 19592-65 EWG(j)/EWT(m)/EPF(s)/EPR/EWP(t)/EWP(b) Pr-4/Pr-4 IWP(c)/
ASD(f)-3/FSD(t) JD/JG
ACCESSION NR: AP4045100 S/0020/64/158/001/0151/0154

AUTHOR: Glushkova, V. B.; Keler, E. K.; Sokolov, Yu. G.; Semenov, N. N.

TITLE: Reaction of Nd₂O₃ with water

SOURCE: AN SSSR. Doklady*, v. 158, no. 1, 1964, 151-154

TOPIC TAGS: neodymium oxide water system, neodymium oxide, hydrate, stability, structure

ABSTRACT: The Nd₂O₃-water system was studied: neodymium oxide hydrates were obtained by hydrothermal synthesis; neodymium oxides were reacted with water at different temperatures and under different relative humidities; and the stability and structure of the hydrated neodymium oxides were determined. Both the A- and C- modification of Nd₂O₃ were formed in a relative moist atmosphere of 25-95%. At 35°C the A-form was stable to water vapor while the C-form hydrated to 3Nd₂O₃·2H₂O (I). I was also formed by the C-form at 90-100°C regardless of humidity, while the A-form formed the trihydrate Nd₂O₃·3H₂O. In the 100-400°C range the C-form gained weight (with accompanying crystal lattice dis-

Card 1/2

L 19592-65

ACCESSION NR: AP4045100

tortion) in moist oxygen or moist argon, forming I, but no higher oxides. I started to decompose at ~ 250 C to Nd₂O₃·H₂O, which at 450 C formed 3Nd₂O₃·H₂O. The latter reverted to the hexagonal A-form Nd₂O₃ at 800-1000 C. The elementary cell parameters were determined for these compounds. It was concluded the phases generally assumed to be the C-form were actually the hydrate 3Nd₂O₃·H₂O. Orig. art. has: 2 figures

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry Academy of Sciences, SSSR)

SUBMITTED: 20Apr64

ENCL: 00

SUB CODE: IC, GC

NO REF SOV: 003

OTHER: 008

Card 2/2

L 64185-65 EWT(m)/EWP(t)/EMP(b) IJP(c) JEW/JG
ACCESSION NR: AP5019775 UR/0062/65/000/007/1131/1138
546.65 + \$18.33

AUTHOR: Glushkova, V. B.; Bogatov, A. G.

TITLE: Polymorphism of rare earth sesquioxides

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1965, 1131-1138

TOPIC TAGS: rare earth oxide, polymorphism

ABSTRACT: The polymorphism of rare earth sesquioxides was studied in the following three aspects: (1) effect of conditions of preparation of the oxides on their phase state and determination of the lowest temperatures at which the pure oxides can be obtained from various compounds; (2) study of the presence of reversible polymorphic transformations in the sesquioxides; (3) study of irreversible or slow polymorphic transformations. High-temperature x-ray and thermal analysis established the absence of polymorphic transformations in the 50-1500° range in the following oxides: Y_2O_3 , La_2O_3 , Nd_2O_3 , Sm_2O_3 , Eu_2O_3 , Gd_2O_3 , Dy_2O_3 , Ho_2O_3 , Er_2O_3 , Tm_2O_3 , and Yb_2O_3 . X-ray diffraction analysis confirmed the presence of irreversible transitions in Nd_2O_3 , Sm_2O_3 , Eu_2O_3 , Gd_2O_3 , and their absence at 100-1500° in Y_2O_3 , Dy_2O_3 , Ho_2O_3 , Er_2O_3 , Tb_2O_3 , and Tm_2O_3 . It was shown that the low-temperature C-form of lanthanum

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L 64185-65

ACCESSION NR: AP5019775

oxide cannot be obtained by decomposing oxygen salts or the hydroxide while heating in air at pressure from 1 to 760 mm Hg. The C-form of neodymium oxide was obtained by decomposing neodymium nitrate, carbonate, oxalate, and hydroxide. The irreversible transitions C + A Nd_2O_3 and C + B Sm_2O_3 are associated with a considerable evolution of gas (1.5-2 wt. %). It is postulated that the low-temperature forms of oxides of neodymium, samarium, gadolinium, and europium are metastable modifications which are thermodynamically stable in their temperature range of existence only because of the presence of foreign ions in the oxide lattice. Orig. art. has: 4 figures, 4 tables.

ASSOCIATION: Institut khimii silikatov im. I. V. Gribenshchikova Akademii nauk SSSR
(Institute of Silicate Chemistry, Academy of Sciences SSSR)

SUBMITTED: 10Jun63

ENCL: 00

SUB CODE: IC

NO REF Sov: 004

OTHER: 023

Card 2/2 -Mlb

L 58705-65 EWG(j)/EWP(e)/EWT(m)/EPF(c)/EPR(l)/EWP(k)/EWI(z)/EPF(u)/EWA(e)
PT-4/PE-4/Ps-4 IJP(c) JD/JG

ACCESSION NR: AP5016590

UR/0363/65/001/001/0743/0750
541.123.35:542.65

AUTHOR: Davtyan, I. A.; Glushkova, V. B.; Keler, B. N.

TITLE: A study of the system neodymium trioxide - zirconium dioxide regions rich in zirconium dioxide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 5, 1965,
743-750

TOPIC TAGS: neodymium oxide, zirconium oxide, mixed oxide structure, phase diagram

ABSTRACT: Pressed powder mixtures of ZrO₂ and Nd₂O₃ containing various proportions of the two components were fired at 600-1700°C for various periods of time; some mixtures were prepared by decomposing mixed nitrates or by coprecipitating the hydroxides. In the latter two cases the reaction was considerably faster, and its course was sometimes different. X-ray analysis revealed that additions of Nd₂O₃ lower the temperature of the monoclinic - tetragonal polymorphic transformation of ZrO₂. The unit cell parameters of ZrO₂ and its solid solutions were calculated for various temperatures. The stability of ZrO₂-Nd₂O₃ solid solutions was studied, and x-ray diffraction patterns of these solutions annealed from 1600°C were taken. The changes in the volume of the unit cell and

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L 58705-65

ACCESSION NR: AP5016590

2

in constant of solid solutions of the fluorite and pyrochlore type in the ZrO_2 - Nd_2O_3 system were plotted against the Nd_2O_3 content. It was shown that cubic solid solutions containing less than 20% Nd_2O_3 decompose into a mixture of two solid solutions at temperatures below 1600°C, one tetragonal (or monoclinic), the other cubic (pyrochlore type). The boundaries of the biphase region were also determined. "In conclusion, the authors express their thanks to V. G. Sokolov for assistance in the x-ray analyses." Orig. art. has: 5 figures, 4 tables and 2 formulas.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenishchikova Akademii nauk SSSR (Institute of Silicate Chemistry, Academy of Sciences, USSR)

SUBMITTED: 16Jan65 ENCL: 00 SUB CODE: IC, 4S

NO REF NOV: 000 OTHER: 005

dm
Card 2/2

the mean of each sample determined and the total number of samples taken at each point of sampling. Figure Fig. 8 shows the results of the sampling.

It is also important to note that the results of the study were not limited to the effects of the intervention on the patients' physical health.

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2"

L 1558-66 EWT(m)/EPF(c)/EPF(n)-2/EPF(j)/EPF(t)/EPF(b)/EPO(m) IJP(o)/RPL

JD/WW/JW/JG/RM

ACCESSION NR: AP5022266

UR/0363/65/001/007/1143/1151

55
52
B

AUTHOR: Glushkova, V. B.; Isupova, Ye. N.

TITLE: Thermodynamic calculations of solid phase reactions between oxides of elements of groups II and IV of the periodic table

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 7, 1965,
1143-1151

TOPIC TAGS: thermodynamic calculation, titanate, silicate, zirconate, heat capacity, enthalpy, entropy, beryllium compound, titanium oxide, thermochemistry

ABSTRACT: An analysis of the thermodynamic calculations for solid-phase processes occurring at high temperatures was carried out in which the following formulas were employed:

$$\left(\Delta G_T = \Delta H_T - T\Delta S_T; \Delta G_T^\circ = \Delta H_{298}^\circ + T \cdot \Delta f^\circ; \beta_C = \left(\frac{G_T^\circ - H_T^\circ}{T} \right) \right)$$

Methods of calculation of the temperature dependence of the heat capacity C_p are analyzed for the case of titanates, silicates, and zirconates of elements of group II, and the values obtained are compared. A comparison between the methods

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L 1558-66
ACCESSION NR: AP5022266

of calculating the enthalpies of formation is also made. The methods described account for the instability of oxides of elements in groups II and IV; for example, it is shown that from the thermochemical standpoint, no compounds can form in the BeO-TiO₂ system. The thermodynamic instability of beryllium orthosilicate in the absence of mineralizers is also substantiated. Orig. art. has: 2 figures, 4 tables, and 7 formulas.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 01Feb65 ENCL: 00 SUB CODE: SS, TD

NO REF SOV: 018 OTHER: 012

Card 242

L 11003-66 EWT(m)/EWP(t)/EWP(h) IJP(c) JN
ACC NR: AP5028727

SOURCE CODE: UR/0363/65/D01/011/1955/1964

AUTHOR: Giushkova, V. B.; Davtyan, I. A.; Keler, E. K.

ORG: Institute of Silicate Chemistry im. I. V. Gribenshchikov, Academy of Sciences
SSSR (Institut khimii silikatov Akademii nauk SSSR)

TITLE: The Nd₂O₃-ZrO₂ system. Study of regions rich in neodymium oxide.

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 11, 1965,
1955-1964

TOPIC TAGS: neodymium compound, zirconium compound, solid solution, metal phase system, metal chemical analysis, x-ray analysis, phase transition, phase diagram, chemical stability, phase composition, crystal structure, inorganic oxide
ABSTRACT: Chemical and x-ray phase analyses were used to study the Nd₂O₃-ZrO₂ system. and a diagram of phase transitions was plotted for a region rich in Nd₂O₃. The stability of the cubic solid solution based on Nd₂O₃ was determined and the solution was shown to be stable only above 1500°C. It was found that the primary phase consists of cubic solid solutions when the mixtures are prepared by coprecipitating in the amorphous state followed by crystallization at 400-800°C or by decomposing a mixture of nitrates. As the composition of these metastable solid solutions changes monotonically, there is continuous change in their crystal structure from the Nd₂O₃-type--characteristic of the low-temperature C-form of Nd₂O₃ via the pyrochlore type-- to the fluorite type in which the low-temperature form of ZrO₂ crystallizes. The

UDC: 546.657 + 546.831

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L 11003-66

ACC NR: AP5028727

effect of the addition of ZrO₂ on the C-A transition of Nd₂O₃ was studied and it was shown that small amounts of ZrO₂ hinder the transition of the cubic solid solution (C-form) to the hexagonal (A). Where there is a high ZrO₂ content (10-20%) in the cubic solid solution, the intermediate product formed is a solid solution which crystallizes in a low symmetry (B-type). On heating to 1350-1400°C, the latter converts into an equilibrium mixture of solid solutions with hexagonal and pyrochlore structure. Orig. art. has: 5 figures, 3 tables.

SUB CODE: 07/ SUBM DATE: 24Apr65/ ORIG REF: 005/ OTH REF: 012

PC
Card 2/2

| | | | |
|--|---|----------------|--------------|
| L 11028-66 | EWT(m)/EWP(t)/EWP(b) | IJP(c) | JD/JG |
| ACC NR: AP5028728 | SOURCE CODE: UR/0363/65/001/011/1965/1977 | | |
| AUTHOR: Sazonova, L. V.; Davtyan, I. A.; Glushkova, V. B. | | | |
| ORG: Institute of Silicate Chemistry im. I. V. Gribenshchikov, Academy of Sciences SSSR (Institut khimii silikatov Akademii nauk SSSR) | | | |
| TITLE: Study of the Nd ₂ O ₃ -ZrO ₂ system and effect of the method of preparation on the properties of the product obtained | | | |
| SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 11, 1965, 1965-1977 | | | |
| TOPIC TAGS: neodymium compound, zirconium compound, powder metal sintering, powder metal mixing, phase equilibrium, chemical composition, metal analysis, crystal structure | | | |
| ABSTRACT: Thermal, x-ray phase, molecular-spectroscopic and chemical methods of analysis were used to study the products obtained from sintering pressed powder mix- tures of ZrO ₂ and Nd ₂ O ₃ (in the ratios 90%:10%, 66.7%:33.3%, and 10%:90%). The mix- tures were prepared by combining solutions of the salts and evaporating, coprecipi- tating in the amorphous state, mechanical mixing of the hydroxides and mechanical mixing of the oxides. Thermograms of the mixtures, curves of thermal decomposition, infrared spectra, and x-ray diffraction patterns of the products are given. The me- chanism of formation of equilibrium phases is interpreted. It is shown that the com- position and crystal structure of the products formed are appreciably affected by the method of preparation of the initial mixture. Orig. art. has: 7 figures, 3 tables. | | | |
| SUB CODE: 07,11/ | SUBM DATE: 24Apr65/ | ORIG REF: 005/ | OTH REF: 006 |
| Card 1/1 | UDC: 546.657 + 546.831 | | |

СИДОРЧУК, В. А.; СОЛЯНКА, Т. А.; КЕЛЬДИШ, Р. Е.

Study of the system $\text{Nd}_2\text{O}_3 - \text{Er}_2\text{O}_3$. Regions rich in neodymium
oxide. Izv. AN SSSR. Neorg. mat. T. no. 11; 1964 N 165.
(MFA 18:12)

I. Institut khimii silikatov imeni I.V. Gorbanshet'kova AN
SSSR. Submitted April 24, 1965.

SAMONOKA, L.V., DAVYDAN, I.A.; GLAGOLEVA, V.B.

Study of the system $\text{Na}_2\text{O}_3 - \text{ZrO}_2$ and the effect of the method
of preparation on the properties of the product obtained.
Izv. AN SSSR. Neorg. mat. 1 no.11;1965-1977 N° 16.

(MIRA 19:12)

Izv. Akad. Nauk SSSR. Ser. Khim. Nauk. 1965, No. 11, p. 2456.
U.S. Patent Sh. 1965 3,145,456, Inventor: V. V. Gorbunovskaya et al.
USSR. Submitted April 27, 1965.

L 30250-66 EIT(m)/T/EWP(w)/EWP(t)/ETI IJP(c) NW/JD/JG
ACC NR: AP6015073 (A)

SOURCE CODE: UR/0363/66/002/005/0890/0895

AUTHOR: Davtyan, I. A.; Glushkova, V. B.; Keler, E. K.

ORG: Institute of Silicate Chemistry im. I. V. Gribenshchikov, Academy of Sciences
SSSR (Institut khimii silikatov Akademii nauk SSSR)

TITLE: Effect of europium oxide admixtures on the polymorphism of zirconium dioxide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 5, 1966, 890-895

TOPIC TAGS: euro^mpium compound, zirconium compound, solid solution, phase transition, crystallization, thermal analysis, x ray analysis

ABSTRACT: The ZrO₂-Eu₂O₃ system was studied by using thermal and x-ray analysis. Addition of Eu₂O₃ was found to lower the temperature of the monoclinic-tetragonal transition of ZrO₂ considerably. Crystallization of mixtures of Eu₂O₃ and ZrO₂, coprecipitated in the amorphous state, forms metastable cubic solid solutions of europium oxide and zirconium dioxide. The crystallization temperature and lattice parameter of the cubic solid solution increase with rising Eu₂O₃ content. The decomposition of the metastable solid solution into stable phases was investigated. It was found that the minimum addition of europium oxide required for the complete stabilization of ZrO₂ is 7 mol % Eu₂O₃. It was shown that the addition of only 2% Eu₂O₃ eliminates the cracking of ZrO₂ during heating. A phase diagram was plotted for the phase transitions in the ZrO₂-Eu₂O₃ system for the region rich in zirconium dioxide (see fig. 1). Orig. art. has: 5 figures, 3 tables.

Card 1/2

UDC: 546.831.4+546.661

Card 2/2

ACC NR: AF6036791

(A)

SOURCE CODE: UR/0363/66/002/011/1998/2002

AUTHOR: Davtyan, I. A.; Keler, E. K.; Glushkova, V. B.

CORG: Institute of Silicate Chemistry im. I. V. Gribenshchikov, AN SSSR (Institut Khimii silikatov AN SSSR)

TITLE: Effect of additions of germanium dioxide and yttrium and neodymium germanates on the polymorphism of zirconium dioxide

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 11, 1966, 1998-2002

TOPIC TAGS: zirconium compound, germanium compound, yttrium compound, neodymium compound, phase transition

ABSTRACT: The article considers the following questions: 1) the formation of solid solutions based on ZrO₂ with additions of GeO₂; 2) the stability of these solid solutions and the volatility of GeO₂ from them; and, 3) the effect of the amount of the additions of germanium dioxide in a solid solution at the temperature of the monoclinic-tetragonal transition of ZrO₂, and the possibility of the tetragonal form of ZrO₂. Solid solutions of zirconium with additions of 2, 5, 10, 15, and 20 mole % GeO₂ were prepared by the method of coprecipitation. In all the mixtures there was observed an exothermic effect of crystallization, and at the same time the crystallization

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UDC: 546.831.4+541.7

ACC NR: AF6036791

temperature of the product increased with an increase in the amount of additive. X ray analysis of the products indicated that additions of GeO_2 stabilize the tetragonal form of ZrO_2 only up to a temperature of 1200°C . Therefore, further experiments were undertaken with additions of GeO_2 plus oxides of rare earth elements (since oxides of the rare earth elements stabilize ZrO_2 at high temperatures). Ternary mixtures of the following composition were prepared (wt.-%):

| | | | | | | |
|-------------------------|----|----|----|----|------|------|
| ZrO_2 | 96 | 90 | 90 | 90 | 95,7 | 91,7 |
| GeO_2 | 2 | 5 | 2 | 5 | 2 | 5 |
| Y_2O_3 | 2 | 5 | - | - | - | - |
| Nd_2O_3 | - | - | 2 | 5 | 1,3 | 3,3 |

It was found that stabilization of zirconium dioxide with yttrium germanates makes it possible to increase the stability of the solid solutions at high temperatures. Orig. art. has: 5 figures.

SUB CODE: 0720 / SUBM DATE: 07Jan66 / OTH REF: 001

Card 2/2

ACC NR: AP7006206

(A)

SOURCE CODE: UR/0363/67/003/001/0119/0126

AUTHOR: Glushkova, V. B.; Davtyan, I. A.; Kolor, E. K.

ORG: Institute of Silicate Chemistry im. I. V. Gorbetschikov, Academy of Sciences,
SSSR (Institut khimii silikatov Akademii nauk SSSR)

TITLE: Preparation and properties of yttrium and neodymium germanates

SOURCE: AN SSSR. Izvestiya. Nauchno-tekhnicheskie materialy, v. 3, no. 1, 1957, 119-126

TOPIC TAGS: yttrium compound, neodymium compound, germanato

ABSTRACT: Yttrium and neodymium germanates were prepared by both coprecipitation and mechanical mixing of the oxides, and the systems obtained ($Y_2O_3\text{-GeO}_2$ and $La_2O_3\text{-GeO}_2$) were subjected to differential thermal and x-ray diffraction analyses. The formation of equilibrium crystalline products was found to be complete at 1200°C in all cases. Both systems contained compounds of the compositions $Ln_2O_3\text{:GeO}_2 = 1:2$, 1:1 and 2:1. The interplanar distances were calculated for these compounds. The behavior of the germanates at high temperatures was studied by subjecting them to prolonged isothermal firing and then to x-ray analysis. Yttrium germanates were found to be more stable than neodymium germanates at high temperatures. Orig. art. has: 6 figures and 6 tables.

SUB CODE: C7/ SUBM DATE: 29Dec65/ ORIG REF: 003/ OTH REF: 001

Card 1/1

UDC: 546.641'289

GLUSHKOVA, V. P.

USSR/Chemistry - Benzene and Naphthalene
Derivatives

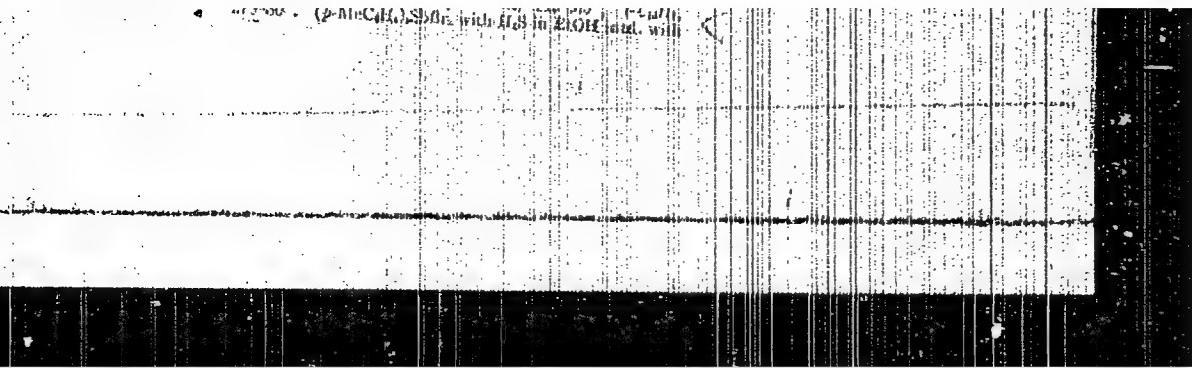
Sep 52

"X-Ray Investigation of the Crystals of Certain Nitro and Halogen Derivatives of Benzene and Naphthalene," G. A. Goldfarb, S. B. Zhdanov, M. M. Umanets, and V. P. Glushkova, Phys.-Chem. Inst. im L. Ya. Karpova, Moscow.

Zhur Fiz Khim, Vol 26, No 9, pp 1259-1265

Obtained crystals and detd elementary cells and spatial groups of the following compds: 1,3-dichloronaphthalene; 2,6-dichloro-1-nitrobenzene; 2,4,6-tribromo-1-nitrobenzene; benzo-benzene; and 1,3,7,8-tetrinitronaphthalene (I). Checked elementary cells and spatial groups of the crystals of 1,2,5-trinitrobenzene and 2,4,6-trinitrotoluene (II). In the crystals of (I) and (II), certain interference abnormalities were detected, indicating the presence of periodic two-dimensional disturbances in the regular distribution of atomic planes.

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000515430001-2



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APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515430001-2"

ПОДСЫПОВ, Г. С., МАСЛЕННИКОВА, В. А. СИСТЕМА КРИСТАЛЛОГРАФИИ

Crystalllography

Crystal structure of thiocyanates. Part 9. X-ray investigations of crystals of complex hexathiocyanates of chromium, nickel and platinum. *Zhur. fiz. khim.* 27, no. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

GLUSHKOVA, V.P.

USSR

*Isomorphism and morphology of molecular crystals
UMA₁(R = Ph, 9b; U = S, Se; Ar = C₆H₅, C₆H₅Cl),
G. S. Zhdanov, V. A. Pospelev, M. M. Gerasimchuk, and V. P.
Glushkova. Doklady Akad. Nauk SSSR, 201, 1975.
Tetrahedral crystals of the above type (angs. P and 9b) I
are colorless and metallic and have the form of 2n cubes,
have the configuration of a trigonal bipyramide and glu-
xes of the 3m order. In the crystal, since they belong to the
monoclinic class, each unit cell contains 4 units. Action
of x-rays on UMA₁ a yellow color. Morphotropicheskaya
is observed when Ph is replaced by p-CH₃Me. Substitution
of atom U causes isomorphic changes only when there
are large discrepancies in σ^2 : 0.628 (U), 0.45, 0.75 (Ar).*

GLUSHKOVA, V.P.; KOCHESHKOV, K.A.

Reaction of the synthesis of thallium aromatic and heterocyclic series. Dokl. AN SSSR 103 no.4:615-618 Ag'55. (MIRA 8:11)

1. Chlen-korrespondent Akademii nauk SSSR (for Kocheshkov) 2. Fiziko-khimicheskiy institut imeni L.Ya.Karpova
(Thallium organic compounds)

GLUSHKOVA, V.P.; KOCHESHKOV, K.A.

Interaction between diaryl mercury and salts of trivalent thallium
as a method for the synthesis of ArTlX_2 compounds. Izv. AN SSSR Otd.
khim. nauk no.10:1193-1198 O '57. (MIRA 11:3)

1.Fiziko-khimicheskiy institut im. L.Ya. Karpova,
(Mercury compounds) (Thallium organic compounds)

Glushkova, V. P.

AUTHORS: Glushkova, V. P., Kochetkov, A. A.

62-11-16/29

TITLE: Introduction of Thallium Into Dibenzofuran(Taliirkvaniye dibenzofurana).

PERIODICAL: Izvestiya AN SSSR, Otdelenie Khimicheskikh Nauk, 1957,
Nr 11, pp. 1371-1392 (USSR)

ABSTRACT: The introduction of thallium into the amisol and tiophen by the aid of salts of organic acids of the trivalent thallium was carried out by the authors (reference 1) and it was shown that this leads towards thalliumorganic compounds of the class ArTJX_2 and not - as maintained by the American authors (reference 2) - towards compound of the class Ar_2TJK . Here the behaviour of the dibenzofuran with regard to the salts of organic acids was compared with that with regard to the halogen-salts of the trivalent thallium. It was shown that the introduction of thallium as also in previous cases leads to the class ArTJX_2 . Furthermore it is shown that the introduction of thallium with regard to oxygen does not lead to the para-position but to the orthoposition. There are 7 references, 2 of

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Introduction of Thallium Into Dibenzofuran.

62-11-16/29

which are Slavic.

ASSOCIATION: Physico-Chemical Institute imeni L. Ya. Karpov (Fiziko-khimicheskiy institut im. L. Ya. Karpova).

SUBMITTED: July 5, 1957.

AVAILABLE: Library of Congress

Card 2/2